

REMARKS

Claims 1-9, 11-14, and 16-40 are presently pending in the application. Claims 4, 11, 13, 14, 18, 21, 26, 28, 32, and 35 have been amended. More specifically, claim 14 has been rewritten in independent form to include all of the features of the corresponding base claim and any intervening claims. Accordingly, this claim has not been narrowed by this amendment, and any subsequent rejection of this claim on new grounds should not be made final. Claims 11 and 13 have been amended solely to change the dependencies of these claims. Claim 13 was further amended to fix the antecedent basis of certain features of this claim. Claims 4, 21, 26, and 28 have been amended to correct typographical errors and improve the readability of these claims without changing the scope of these claims. New claim 40 has been added. Claims 10 and 15 have been cancelled without commenting on or conceding the merits of the outstanding rejections. As such, these claims have been cancelled without prejudice to pursuing these claims in a continuation, divisional, or other application.

In the October 20, 2004 Office Action, the Examiner raised several issues with respect to the specification and claims. More specifically, the status of the application in light of this Office Action is as follows:

(A) The disclosure of the application was objected to because of several typographical errors and because the heading "Summary of the Invention" was missing;

(B) Claims 10-13, 18, 23-25, and 32-35 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,696,708 to Leung ("Leung"); and

(C) Claims 1-9 and 26-31 were allowed, and claims 14-17, 19-22, and 36-39 were indicated to be allowable if rewritten in independent form to include all of the features of the base claim and any intervening claims.

A. Response to the Disclosure Objections

The disclosure was objected to because of several typographical errors. Claim 21 has been amended to change "multiplt" in line 2 to --multiple--. Furthermore, as mentioned above claims 4 and 26 have also been amended to fix typographical

errors. In addition, the specification has been amended at page 5, line 26, to change "lime" to --line--, and at page 8, line 3, to change "102" to --202--.

The disclosure was further objected to because the heading "Summary of the Invention" was missing from the specification. The applicant submits that such a heading is not required. 37 C.F.R. § 1.73 provides, in relevant part, that "[a] brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, *should* precede the detailed description." (emphasis added.) In fact, the MPEP states that the summary can be brief, including as little as "one or more clear, concise sentences or paragraphs." (MPEP § 608.01(d).) In the originally filed specification of the above identified application, the first six paragraphs of the Detailed Description (Specification, p. 3-4) provide an overview of the nature and substance of the invention. Accordingly, the objection to the disclosure should be withdrawn.

B. Response to the Section 102 Rejection of Claims 10-13, 18, 23-25, and 32-35

Claims 10-13, 18, 23-25, and 32-35 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Leung. Claim 10 has been cancelled in this response and claims 11-13 have been amended to depend from allowable claim 14. Therefore, the Section 102 rejection of claims 10-13 should be withdrawn. The following remarks accordingly address the patentability of claims 18, 23-25 and 32-35 over Leung.

1. Claim 18 is Directed to an Apparatus for Resizing an Image Including, *Inter Alia*, a Memory Interface and at Least One Filter for Processing Data in Each of Multiple Dimensions

Independent claim 18 is directed to an apparatus for resizing an image that includes image data in multiple dimensions. The apparatus includes a memory interface coupled to a memory that stores the image data. The apparatus further includes at least one filter. The filter processes data in each of the multiple dimensions and is configurable to perform at least one of a group of operations during one pass of the image data. The operations performed can include decimation by two, low-pass filtering, and generating signal gradients for resampling. The image data is processed

in all dimensions in at least one pass and stored as processed image data in the memory.

2. Leung is Directed to a Method for Varying the Configuration of a Finite Impulse Response (FIR) Filter

Leung is directed to a general multipass decimating filter structure and a method for varying the configuration of the FIR filter. Referring to Figure 6 of Leung, this reference discloses digital data input into a dual port RAM 60. The RAM 60 is configured to receive the input data at a sampling rate of f_s for use in a filter algorithm. The data is output from the RAM 60 at a rate of $32f_s$ for input to a multiplication circuit 62. The multiplication circuit 62 also receives input from the output of a Read Only Memory (ROM) 64 that stores the filter coefficients and outputs the stored filter coefficients. For example, the coefficient ROM 64 stores coefficients $h[0]$ through $h[n-1]$ and outputs the coefficients in response to an address received on an address input 74. A state machine 76 that operates under a fixed clock 78 determines the time at which the address on line 74 is generated for the coefficient ROM 64. The state machine 76 generates addresses on the line 74 for either a low word rate mode (i.e., the undecimated coefficient filter mode with all coefficients utilized in a multiplication operation) or a high word rate mode (i.e., the decimated coefficient file mode such that only every other coefficient is utilized in a multiplication operation).

3. Leung Does Not Support a Section 102 Rejection of Claim 18 Because the Applied Reference Fails to Disclose or Suggest Several Claimed Features

Claim 18 is patentable over Leung under Section 102 because this reference fails to disclose or suggest several features of claim 18. For example, Leung fails to disclose or suggest processing the image data "in all dimensions in at least one pass." More particularly, claim 18 recites that multiple passes are used to process the multiple-dimensioned image. All of the dimensions are at least partially processed in each pass. At best, Leung only discloses processing a single dimension in one pass. Therefore, Leung fails to teach or suggest all of the claimed features. Accordingly, the Section 102 rejection of claim 18 should be withdrawn.

Claims 23-25 are allowable as depending from allowable base claim 18, and also because of the additional features of these dependent claims. Accordingly, the Section 102 rejection of claims 23-25 should be withdrawn.

Independent claims 32 and 35 include several features generally similar to claim 18, and are thus patentable over Leung for the reasons discussed above with respect to claim 18.

Claims 33 and 34 are allowable as depending from allowable base claim 32, and also because of the additional features of these dependent claims. Accordingly, the Section 102 rejection of claims 33 and 34 should be withdrawn.

C Response to the Indication of Allowable Subject Matter

The applicant thanks the Examiner for allowing claims 1-9 and 26-31, and indicating that claims 14-17, 19-22, and 36-39 would be allowable if rewritten in independent form to include all of the features of the base claim and any intervening claims. Claim 15 has been cancelled and, therefore, the objection to this claim is now moot.

Claim 14 has been rewritten in the stated form and, accordingly, the objection to this claim should be withdrawn. Claims 16, 17, 19-22, and 36-39 have not been rewritten in independent form because their respective base claims should now be in condition for allowance for the reasons discussed above. Therefore, the objection to claims 16, 17, 19-22, and 36-39 should be withdrawn.

D. New Claim 40

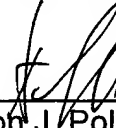
New claim 40 has been added by this amendment. Applicant respectfully submits that claim 40 is fully supported by the originally filed specification. New claim 40 is patentable over the applied reference for the reasons discussed above with respect to claim 18, and also for the additional features of this claim.

Conclusion

In view of the foregoing, the pending claims comply with 35 U.S.C. § 112 and are patentable over the applied art. The applicant respectfully requests reconsideration of the application and a mailing of a Notice of Allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-3982.

Respectfully submitted,

Perkins Coie LLP



Aaron J. Poledna
Registration No. 54,675

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Correspondence Address:

Customer No. 25096
Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
(206) 359-8000